

1. A memory array with byte-alterable capability comprising:
a select gate metal oxide semiconductor field effect transistor,
5 MOSFET device, and
a split-gate memory cell device whose source is connected to the
drain of said select gate MOSFET device.
- 10 2. The memory array with byte-alterable capability of claim 1 further comprising:
bit lines which are tied to the drains of said split-gate memory
cell.
- 15 3. The memory array with byte-alterable capability of claim 1 further comprising:
source lines which are tied to the sources of said select gate
MOSFET devices.
- 20 4. The memory array with byte-alterable capability of claim 1 further comprising:
word lines which are tied to control gates of said split-gate memory
cell.
- 25 5. The memory array with byte-alterable capability of claim 1 further comprising:
select lines which are tied to select gates of said select
gate MOSFET devices.

6. The memory array with byte-alterable capability of claim 1 wherein said control gate MOSFET contains a floating gate which is insulated from said control gate by a dielectric insulating material such as silicon dioxide.

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7. The memory array with byte-alterable capability of claim 6 wherein said split-gate memory cell contains a source region which is also the drain for said select gate MOSFET device.

10 8. The memory array with byte-alterable capability of claim 6 wherein said control gate MOSFET contains a drain region.

9. The memory array with byte-alterable capability of claim 6 wherein said control gate MOSFET contains a control gate which is insulated from said
15 floating gate by a dielectric insulating material such as silicon dioxide.

10. The memory array with byte-alterable capability of claim 6 wherein said control gate contained in the control gate MOSFET device is insulated from said drain of said control gate MOSFET device by a dielectric insulating material.

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11. The memory array with byte-alterable capability of claim 1 wherein said select gate MOSFET contains a select gate which is insulated from said select gate drain region and said select gate source region by a dielectric insulating material.

12. The memory array with byte-alterable capability of claim 1 wherein said bits of said bytes have a common source line.

5 13. The memory array with byte-alterable capability of claim 1 wherein said source lines common to said bytes have a high voltage applied to inhibit erase of said cells of said unselected bytes.

14. The memory array with byte-alterable capability of claim 1 wherein said
10 source lines common to said bytes have a low voltage applied to enable an erase of said cells of said unselected bytes.

15. The memory array with byte-alterable capability of claim 1 wherein the erasure of selected bytes requires a high voltage on said select gates.

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16. The memory array with byte-alterable capability of claim 1 wherein the erasure of selected bytes requires a high voltage on said control gates.

17. The memory array with byte-alterable capability of claim 1 wherein the
20 programming of selected cells of said selected bytes require high voltage on said select gate, a lower voltage on said control gate and a high voltage on said source line.

18. The memory array with byte-alterable capability of claim 1 wherein said word lines common to said bytes have a zero voltage applied to inhibit programming of unselected cells.

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19. A method of producing a memory array with byte-alterable capability comprising the steps of:

10 including a select gate metal oxide semiconductor field effect transistor, MOSFET device, and

including a split-gate memory cell whose source is connected to the drain of said select gate MOSFET device.

15 20. The method of producing a memory array with byte-alterable capability of
claim 19 further comprising the step of:

including bit lines which are tied to the drains of said control gate
20 MOSFET devices.

21. The method of producing a memory array with byte-alterable capability of claim 19 further comprising the step of:

25 including source lines which are tied to the sources of said select
gate MOSFET devices.

22. The method of producing a memory array with byte-alterable capability of claim 19 further comprising the step of:

5 including word lines which are tied to control gates of said control gate MOSFET devices.

23. The method of producing a memory array with byte-alterable capability of claim 19 further comprising the step of:

10 select lines which are tied to select gates of said select gate MOSFET devices.

15 24. The method of producing a memory array with byte-alterable capability of claim 19 wherein said control gate MOSFET contains a floating gate which is insulated from said control gate by a dielectric insulating material such as silicon dioxide.

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25. The method of producing a memory array with byte-alterable capability of claim 24 wherein said control gate MOSFET contains a source region which is also the drain for said select gate MOSFET device.

25 26. The method of producing a memory array with byte-alterable capability of claim 24 wherein said control gate MOSFET contains a drain region.

27. The method of producing a memory array with byte-alterable capability of claim 24 wherein said control gate MOSFET contains a control gate which is insulated from said floating gate by a dielectric insulating material such as silicon dioxide.

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28. The method of producing a memory array with byte-alterable capability of claim 24 wherein said control gate contained in the control gate MOSFET device is insulated from said drain of said control gate MOSFET device by a dielectric insulating material.

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29. The method of producing a memory array with byte-alterable capability of claim 19 wherein said select gate MOSFET contains a select gate which is insulated from said select gate drain region and said select gate source region by a dielectric insulating material.

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30. The method of producing a memory array with byte-alterable capability of claim 19 wherein said bits of said bytes have a common source line.

31. The method of producing a memory array with byte-alterable capability of claim 19 wherein said source lines common to said bytes have a high voltage applied to inhibit erase of said cells of said unselected bytes.

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32. The method of producing a memory array with byte-alterable capability of claim 19 wherein said source lines common to said bytes have a low voltage applied to enable an erase of said cells of said unselected bytes.

5 33. The method of producing a memory array with byte-alterable capability of claim 19 wherein the erasure of selected bytes requires a high voltage on said select gates.

34. The method of producing a memory array with byte-alterable capability of
10 claim 19 wherein the erasure of selected bytes requires a high voltage on said control gates.

35. The method of producing a memory array with byte-alterable capability of claim 19 wherein the programming of selected cells of said selected bytes
15 require high voltage on said select gate, a lower voltage on said control gate and a high voltage on said source line.

36. The method of producing a memory array with byte-alterable capability of claim 19 wherein said word lines common to said bytes have a zero voltage
20 applied to inhibit programming of unselected cells.